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BOOK REVIEW

All's fair in love and war

Based at the University of Virginia Medical School, Jonathan Moreno, director of their Centre for Biomedical Ethics, explores the ethical, social and legal implications of research into neuroscience. In particular, he questions the work undertaken by the Defense Advanced Research Projects Agency (DARPA), set up by the US government in 1958 to ensure that the USA did not fall behind the Soviets in the space race. DARPA, with a current budget of around three billion million dollars, diversified from its original projects and currently investigates any form of science that has implications for national security. Early in 2006, it included in its strategic targets: 'biological approaches for maintaining the warfighter's performance, capabilities and medical survival in the face of harsh battlefield conditions; biological approaches for minimizing the after-effects of battlefield injuries...as well as faster recuperation from battlefield injury and wounds...new approaches for understanding and predicting the behaviour of individuals and groups, especially those that elucidate the neurobiological basis of behaviour and decision making' (pp. 12–13).

Because many of the defence technology projects sponsored by DARPA were shrouded in secrecy, it heightens the necessity for an ethical debate but at the same time makes this problematic. Jonathan Moreno is particularly concerned with DARPA's neuroscience projects, studies designed to discover ways to maximize the performance of individuals as well as various non-lethal disabling technologies, such as anaesthetic agents, foul-smelling chemicals and acoustic technologies of use in quelling civil disturbance. As a member of two presidential ethics committees, he is well placed to conduct this analysis.

In a chapter entitled 'building better soldiers', Moreno explores research into ways of enhancing their performance on the battlefield by allowing them to function for longer periods without sleep, improving cognitive capacity and even to turn down natural fear responses. These initiatives are predicated on the assumption that 'the human being is the oldest instrument of warfare but also its weakest link' (p. 114). But how true is this belief? In attempting to apply cutting-edge neuroscience to the battlefield, there is a danger of forgetting that soldiers have been fighting each other ever since individuals formed themselves into groups. Sadly, it is an activity that has occupied a significant place in the histories of every race, albeit with different

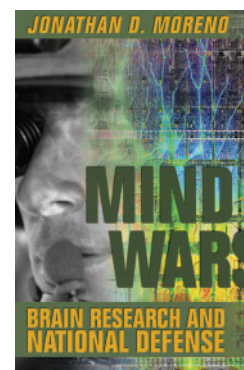
MIND WARS, BRAIN RESEARCH AND NATIONAL DEFENCE

By Jonathan D. Moreno
2006.

New York: Dana Press

Price: \$23.95/£12.41

ISBN: 1932594167



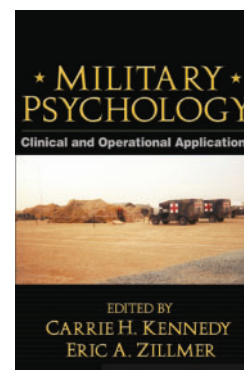
MILITARY PSYCHOLOGY, CLINICAL AND OPERATIONAL APPLICATIONS

Edited by Carrie H. Kennedy and Eric A. Zillmer
2006.

New York: The Guildford Press

Price: \$45.00/£30.50

ISBN: 1572307242



frequencies and rates of success. It is likely, therefore, that 21st century man is reasonably well programmed to fight when compelled to do so. Indeed, the writings of veterans reveal this unpalatable fact.

Nicholas Mosley, who served as an infantry officer in Italy during the Second World War and had extended experience of combat, reached a challenging conclusion:

War is both senseless and necessary, squalid and fulfilling, terrifying and sometimes jolly... Humans are at home in war (though they seldom admit this). They feel they know what they have to do (Mosley, 2006, p. ix).

By contrast, he argued that humans ‘do not feel at home in peace’ (2006, p. 167). In battle, life is reduced to its basic elements and driven by the instinct to survive. Writing from his experience of the First World War, Siegfried Sassoon provided earlier testimony to this view:

I suddenly realize the narrowness of the life a soldier leads on active service. The better the soldier, the more limited his outlook (Sassoon, 1937, p. 617).

After a period of preparation and training, Sassoon wrote in his diary ‘I shall find it easier when we get into the Line, where one alternates between intense concentration on real warfare and excusable recuperation afterwards’ (Sassoon, 1937, p. 627).

Although militaries over the world understand the value of training, there is perhaps an element of combat that cannot be taught and is, as Sassoon and Mosely imply, innate and instinctual. In the past, armies have sought to prepare troops by increasingly realistic training. In 1941, for example, the British set up battle schools which sought to desensitize soldiers to death and suffering by including live ammunition and exposure to blood in abattoirs (Shephard, 2000). It was found, however, that such attempts at inoculation in a context of safety simply upset or traumatized soldiers to no good effect and the experiment was abandoned. It appeared, therefore, that inner resources were tapped only in a context of genuine danger.

Moreno rightly points out that scientific study of humans in battle was given significant impetus by the Second World War and led to the publication of key texts such as Stouffer *et al.*’s (1949) *American Soldier*, and the influential *Men Against Fire* by S.L.A. Marshall (1947). Moreno rightly quotes Marshall’s finding that only 25% of combat troops fired their weapons with purpose in combat. Although he does not add that Marshall conducted no scientific analysis to reach this conclusion, basing it on anecdote and estimates. There is, perhaps, something inherently unknowable about combat; knowledge denied to all apart from those who took part. Historians can, of course, seek approximations through oral testimony and contemporary accounts but there are few certainties about how men behave in the heat of battle (Jones, 2006).

In recent years, asymmetric war against terrorists or guerrilla groups has drawn troops away from set-piece battles towards nebulous open-ended conflicts. The old model of all-out industrial war between nation states may have evolved into what General Rupert Smith (2006) calls ‘war amongst the people’. These are political or ideological struggles in which one set of combatants do not wear uniforms, deliberately conceal themselves among the civilian population and seek to win hearts and minds. High-tech weaponry has little impact against guerrillas who use AK-47 assault rifles and suicide bombers. The overwhelming military might of Western nations has no obvious utility against such forces. It is tempting to

speculate whether the research currently being funded by DARPA is tuned to the new asymmetric warfare or relates to the traditional battlefield dominated by armour and air power.

Mind Wars is a deceptive book. Although well-written and structured into sections, it is not an easy read. In part, this is because Moreno deals with dilemmas for which, as the author notes, there exists ‘no easy fix for these issues’ (p. 174), but also because there is little qualitative data on which to base these debates. We have, for example, little way of assessing which of these neuroscience projects sponsored by DARPA are wildly speculative and which likely to yield practical results. Whilst notes on sources are provided at the end of the book for each chapter, these are not tied through footnotes or references to the quotations and summarized arguments in the text—an omission in a work of scholarship.

The question remains whether military authorities could successfully manipulate the ‘neuroscience’ of participants and indeed, if this were possible, whether this is ethical in the context of asymmetrical warfare. It has recently been argued that medicines designed to extend periods of wakefulness have the side-effect of disturbing judgement. Although short-term problems may be managed, the extended use of benzedrine by troops in the Second World War led to problems of continued use and ever higher doses. It is far from certain that more modern manipulations would be effective in wars that increasingly require a range of skills from cultural understanding through to close-quarter fighting in occupied settlements.

Military Psychology, edited by Carrie H. Kennedy and Eric A. Killmer, is a wide-ranging collection of essays, which cover such diverse topics as the nature of combat stress, the psychology of Nazi war criminals, crisis and hostage negotiation, the psychology of Al-Qaeda terrorists, suicide prevention in the military and fitness-for-duty evaluations. Most of the authors are psychologists serving in the US armed forces who write about areas of professional expertise and practice.

In general, these essays are not the product of original research but represent a summary of what is known and considered best practice. The chapter on the history of military psychology, for example, does not include primary sources, and is based on published literature. Each chapter has its own bibliography and can be read in isolation. It is therefore a valuable textbook for trainees and students of military psychology.

Interestingly, the chapter on operational psychology recognizes that asymmetric warfare is now more common than conflict between entire nations. Military psychologists are seen as having an important role in interpreting the motives and behaviour of terrorists and guerrilla groups. The pace of overseas deployment for both the UK and US armed forces has significantly increased over the last decade. Troops often have little time for training and the acquisition of new skills. Furthermore, elite units can find

themselves committed to high-intensity combat of a kind not seen since the Second World War. A role is identified for psychologists in assessing those suitable for these duties and for periodic mental health screening.

Although the volume is solid about current practice, its historical references are sometimes flawed. The chapter on combat stress reaction (CSR), for example, equates this disorder, first defined in the early 1980s, with nostalgia in the US Civil War, shell shock, irritable heart, effort syndrome and even gas hysteria during the First World War. As the authors themselves point out, CSR is an acute and largely self-recovering response to battle, whereas the other diagnoses are often chronic and commonly characterized by medically unexplained symptoms.

Whilst no two war syndromes from different conflicts are exactly the same, it is possible to identify common patterns of symptoms in such disorders (Jones *et al.*, 2002). Akin to different varieties in the same species, irritable heart, effort syndrome, gas hysteria, shell shock and most contentious of all ‘Gulf War syndrome’ were shaped by the medical culture of their age. During the Second World War, for example, non-ulcer dyspepsia was a common cause of invalidity from the armed forces in part because it was believed that the stress of military service and nature of the diet lay behind the epidemic of duodenal ulcer. Without endoscopy for accurate diagnosis and antibiotics for effective treatment, stomach complaints attracted the attention of both soldiers and military doctors. Popular health fears, the limits of medical science and the changing characteristics of combat itself have all contributed to the definition and causal explanations attached to war syndromes.

All the authors are from the United States and they write almost exclusively about America. Some of their observations may not translate to other cultures. The sections on the assessment and treatment of psychological trauma may be a case in point. Indeed, if there was any doubt about the importance of culture in the expression and management of psychological disorders, then this book will dispel them. Clear differences emerge between accepted US practices and what would be considered appropriate in the UK armed forces. A photograph shows a uniformed naval psychologist

practicing psychotherapy on board a US aircraft carrier, while the caption records that he ‘can be the sole mental health provider for up to 12 000 people when deployed’ (p. 63). Whilst the Royal Navy is currently running a clinical trial of a system designed to assess those at risk of psychological disorder following a traumatic exposure (TRIM), there are no plans to assign psychotherapists to warships, albeit one as large as an aircraft carrier. Indeed, since the Second World War, psychologists attached to UK armed forces have been civilian, and then only the army embraced them for the purposes of officer and trade selection.

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